

Project Summary and Justification

Department	<u>Public Utilities</u>
Division	<u>Water Supply & Distribution</u>

The 2005-2011 Capital Improvement Program for the Lincoln Water System has been prepared and updated based upon information and recommendations contained in the 2002 Comprehensive Plan and the 2002 Water Master Plan. These documents are based upon the need to eliminate or reduce existing system deficiencies, replace deteriorating infrastructure, and the need to construct capital facilities in order to ensure that the citizens of the City of Lincoln are supplied with an adequate quantity of high quality water. It is important that these capital improvements be planned judiciously and implemented on a timely basis to provide assurances of meeting these objectives.

Project 1 General System Improvements

- a. Security Upgrade
To enhance the security of critical water infrastructure.
- b. Facilities Master Plan
To update the 2002 Master Plan with respect to planned improvements and community growth, required every five years.
- c. Preliminary Design & Engineering Support
To provide for efforts not directly related to funded projects, i.e., aerial photos, contours, GIS map conversions, etc.

Project 2 Water Supply: Wells, Treatment, and Transmission

- a. Control System Upgrade
To replace or upgrade hardware, software, and communication wires at treatment plant, scheduled with plant expansion.
- b. Additional Supply
To continue to provide water rights, evaluate existing supply capacity, and plan for supply beyond existing facilities.
- c. Infrastructure Rehabilitation
To make minor improvements to existing production facilities such as windows, doors, gutters, etc.
- d. Treatment Plant Expansion
To provide at least a 25 MGD increase to existing capacity of 110 MGD to water treatment plant.
- e. Water Supply Wells
To provide at least a 25 MGD increase to existing capacity of 110 MGD to water supply wells.

Project 3 Storage Reservoirs

- a. Floating Storage Reservoir - Cheney Booster District
To construct a new elevated storage reservoir near 84th and Yankee Hill to provide fire storage and reliability to growth areas in SE Lincoln.

Project 4 Pump Stations

(No Pump Stations in this CIP.)

Project Summary and Justification (cont.)

Department	Public Utilities
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Project 5 Major Transmission Mains

- a. Transmission Main to Lincoln
To construct water transmission main to increase capacity above existing 100 MGD to meet growth needs of the city.
- b. Transmission Main, NE to Vine - Carlos & Eastborough to 88th & Holdrege
To construct transmission main in developing areas near 84th & Holdrege prior to full build out of commercial development.

Project 6 Selected Replacement of Water Facilities or Mains such as:

To replace water distribution mains that have served their useful life. Selection is based on deteriorated condition, opportunity to coordinate with major road project, roadway rehabilitation, or community redevelopment. These projects should improve local water quality and distribution reliability, enhance fire protection, and help avoid disruption to the traveling public.

- a. GIS Data Conversion
- b. "O" St., 33rd to 48th
- c. 48th, "O" to "L"
- d. 10th, High to Arapahoe
- e. 17th, "O" to "R"
- f. Air Park Area Mains
- g. Replacement of inoperable distribution valves at various locations

Project 7 Distribution Mains - Listed by Impact Fee Benefit Area

To construct water distribution mains such as the following to serve the growth areas as provided in the Comprehensive Plan, coordinated with development and paving schedules where possible. Funds are appropriated for each benefit area to provide flexibility to construct mains as growth and development occur.

- a. Mains in Area #1
 - South St., SW 27th to SW 33rd
 - West "O" Street, NW 56th west
 - W. Adams, NW 48th to NW 56th
 - Coddington, "L" to Millstone
- b. Mains in Area #2
 - Alvo, NW 12th to NW 27th
 - Fletcher, 14th to 17th
 - 14th & Alvo to N 27th & Arbor
 - 1st & Arbor to NW 12th & Alvo to US 34
- c. Mains in Area #3
 - Arbor, 40th to 56th
 - Arbor, 56th to 70th to 1/4 mile south
 - 56th, Fletcher to Arbor

Project Summary and Justification (cont.)

Department	Public Utilities
Division	Water Supply & Distribution

- d. Mains in Area #4
 - Adams, 81st to 98th to Leighton
 - Havelock, 70th to 84th
 - Holdrege, 88th to Stevens Creek
 - 98th, Leighton to “O” St.
 - “O” St., 84th to 98th
- e. Mains in Area #5
 - 98th, Pine Lake to Yankee Hill
- f. Mains in Area #6
 - Rokeby, 27th to 40th
 - 27th, Rokeby to Satio
 - 40th, Yankee Hill to 1/2 mile south of Rokeby
 - Rokeby, 40th to 48th
 - Yankee Hill, 56th to 84th
 - Yankee Hill, 70th to 84th
 - 70th, Pine Lake to Yankee Hill
 - 84th, Amber Hill to Cheney Booster Reservoir
- g. Mains in Area #7
 - Folsom, Pioneers to Old Cheney, 1st to 14th
 - Folsom, Old Cheney to W. Denton
 - Old Cheney, 1st to 14th

Project 8 Distribution Capacity/Subsidies to Street Construction

- a. Distribution System Capacity Cost

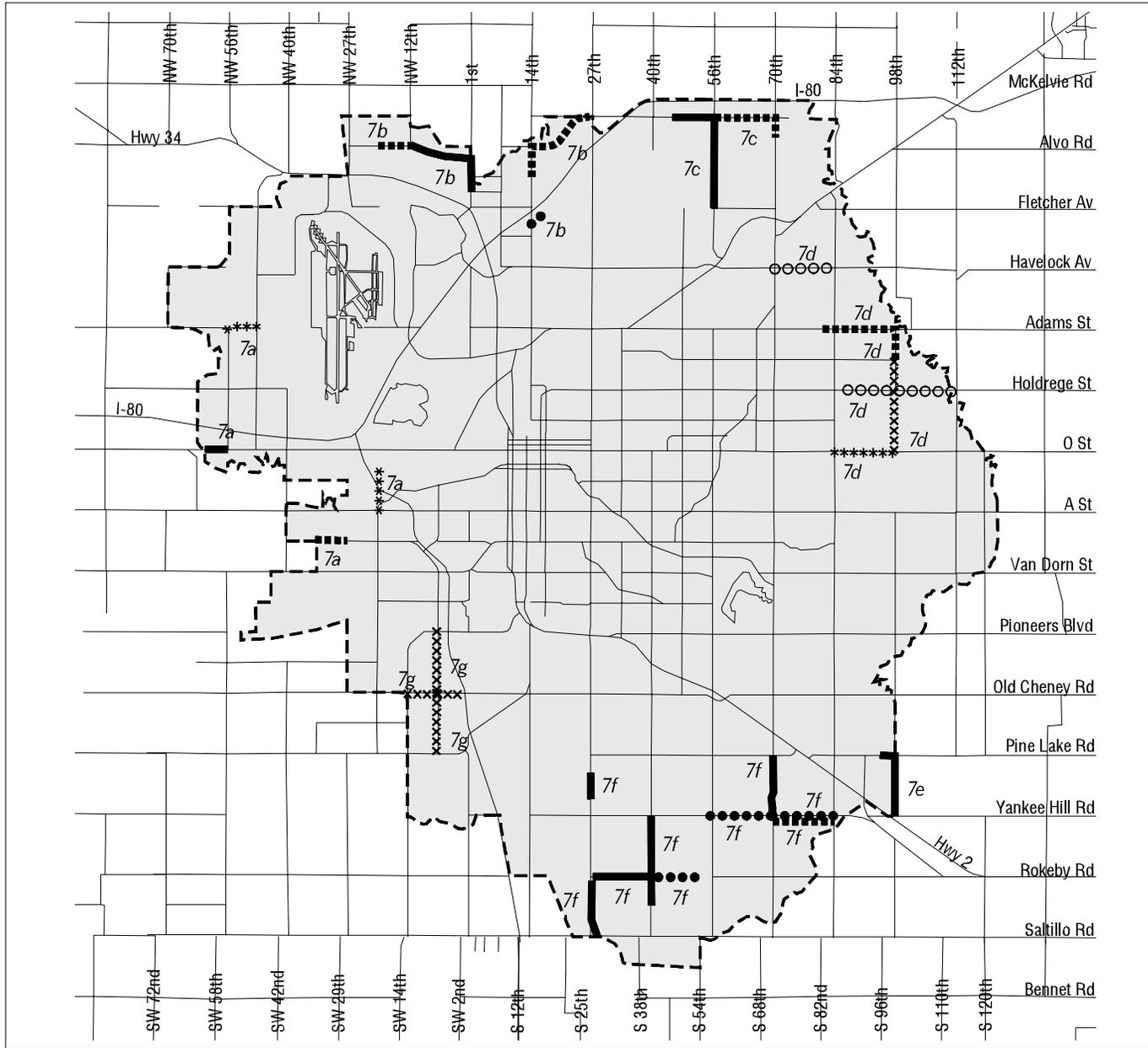
To provide for subsidy to developer to construct 12-inch mains on half mile grid to provide adequate flow for fire protection and to subsidize costs over the maximum assessment rate on water districts.
- b.1. Subsidies to Street Construction

To pay for the cost of relocating mains that conflict with roadway line and grade on Major Road Projects.
- b.2. Subsidies to Antelope Valley

To pay for the cost of relocating mains that conflict with roadway and channel line and grade on Antelope Valley Projects.

Lincoln CIP 2005 - 2011

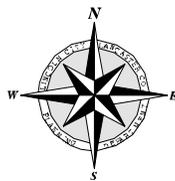
Public Utilities Lincoln Water System



**L
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Lincoln's Future Service Limit Shown as Gray

Map prepared by
City - Co. Planning Dept
GIS Section



M I L E S



Symbol for Fiscal Years

- 2005 - 2006
- 2006 - 2007
- 2007 - 2008
- 2008 - 2009
- xxxxxxxxx 2009 - 2010
- ***** 2010 - 2011

The year shown on this map reflects the year of estimated project completion. Consult the detailed project descriptions and funding schedule for further information.

List of Projects*Department: Public Utilities/Water Supply and Distribution*

Project
Number Project Title

- 1* General System Improvements
- 2* Water Supply - Wells, Treatment, and Transmission
- 3* Storage Reservoirs
- 4* Pump Stations
- 5* Major Mains
- 6* Selected Replacement of Mains
- 7 Distribution Mains
- 8* Distribution Capacity/Subsidies to Street Construction

*Indicates project is NOT shown on the map.

2005 - 2011 CAPITAL IMPROVEMENT PROGRAM		DEPARTMENT: PUBLIC UTILITIES		DIVISION: WATER SUPPLY & DISTRIBUTION		FORM A											
(1)	(2)	(3)	3% Inflation per year (4)														
PROJ. NO.	PROJECT TITLE	PROJ. PRIO.	PROGRAMMED EXPENDITURES & FUNDING SOURCES (FS) (000's)														
			2005-2006	FS	2006-2007	FS	2007-2008	FS	2008-2009	FS	2009-2010	FS	2010-2011	FS			
1	General System Improvements																
	a. Security Upgrade - 701222	A	1,000.0	RB	1,000.0	RB											
	b. Facilities Master Plan	B			440.0	RB											
	c. Preliminary Design & Engineering Support - 506005	A	30.0	UR	30.0	UR	50.0	UR	50.0	UR	50.0	UR	50.0	UR	50.0	UR	
	TOTAL PROJECT 1		1,030.0		1,470.0		50.0		50.0		50.0		50.0		50.0		
2	Water Supply - Wells, Treatment & Trans																
	a. Control System Upgrade - Ashland	A									960.0	UR					
	b. Additional Supply - Ashland - 506010	A	300.0	RB	300.0	RB	300.0	RB	300.0	RB	300.0	UR	300.0	UR	300.0	RB	
	c. Infrastructure Rehab	A	80.0	UR	60.0	UR	60.0	UR	65.0	UR	65.0	UR	65.0	UR	70.0	UR	
	d. Treatment Plant Expansion (25+ MGD)	A							1,670.0	RB	6,950.0	RB	7,960.0	RB			
	e. Water Supply Wells (25+ MGD)	A					840.0	RB	4,150.0	RB	4,220.0	RB					
	TOTAL PROJECT 2		380.0		360.0		1,200.0		6,865.0		13,225.0		8,330.0				
3	Storage Reservoirs																
	a. Floating Storage Reservoir - C B S - 84th & Yankee Hill Road - 701825	A	500.0	RB	3,340.0	RB											
	TOTAL PROJECT 3		500.0		3,340.0												
4	Pump Stations																
	No Pump Stations in this CIP																
5	Major Mains																
	a. Transmission Main to Lincoln - Greenwood - NE - 506212	A	990.0	RB	1,450.0	RB	9,870.0	RB	6,100.0	RB							
			410.0	IF	550.0	IF	630.0	IF									
	b. Transmission Main to Lincoln - NE - Vine - 506212 Carlos & Eastborough to 88th & Holdrege		500.0	RB	3,200.0	RB											
	TOTAL PROJECT 5		1,900.0		5,200.0		10,500.0		6,100.0								

(5)	(6)	(7)		(8)	(9)	(10)	(11)						(1)
TOTAL FOR SIX YEARS (000's)	COST BEYOND 2010-2011 (000's)	PRIOR APPROPRIATIONS		TOTAL CAP COSTS (000's)	COMP PLAN CONFORM	STATUS OF PLANS	COST BREAKDOWNS FOR SIX-YEAR EXPENDITURES (000's)						PROJ. NO.
		(000's)	YEAR FS	(5)+(6)+(7)			PRELIM PLANS	FINAL PLANS	LAND ACQUISITION	CONST	EQUIP / FURNISH	OTHER (EXPLAIN)	
2,000.0	NA	500.0	03-04	2,500.0	GCP	2		355.0		3,195.0			1
		1,050.0	04-05										
440.0	Ongoing	NA		440.0	GCP	0	440.0						
260.0	Ongoing	NA		260.0	GCP	0	260						
2,700.0													
													2
960.0	Ongoing	NA		960.0	GCP	1	96.0			864.0			
1,800.0	Ongoing	NA		1,800.0	GCP	0	1,800.0						
400.0	Ongoing	NA		400.0	GCP	1	40.0			360.0			
17,990.0	890.0	None		18,880.0	GCP	2	1,888.0			16,992.0			
9,210.0	None	None		9,210.0	GCP	2	921.0			8,289.0			
30,360.0													
3,840.0	None	None		3,840.0	GCP	2	384.0			3,456.0			3
3,840.0													
													4
													5
20,000.0	None			20,000.0	GCP	2	2,000.0			18,000.0			
3,700.0				3,700.0	GCP	2	370.0			3,330.0			
23,700.0													

FORM B

(5)	(6)	(7)		(8)	(9)	(10)	(11)						(1)
							COST BREAKDOWNS FOR SIX-YEAR EXPENDITURES (000's)						
							PRELIM PLANS	FINAL PLANS	LAND ACQUISITION	CONST	EQUIP / FURNISH	OTHER (EXPLAIN)	
16,750.0	Ongoing	NA		16,750.0	GCP	1		1675.0		15,075.0			6
16,750.0													
250.0	None	None		250.0	GCP	2		25.0		225.0			
200.0	None	None		200.0	GCP	2		25.0		175.0			
500.0	None	None		500.0	GCP	7		50.0		450.0			
800.0	None	None		800.0	GCP	1		80.0		720.0			
300.0	None	None		300.0	GCP	2		30.0		270.0			
150.0	None	None		150.0	GCP	1		15.0		135.0			
2,559.0	None	None		2,559.0	GCP	2		255.9		2,303.1			
1,500.0	None	None		1,500.0	GCP	1		150.0		1,350.0			
380.0	None	None		380.0	GCP	7		58.0		322.0			
810.0	None	None		810.0	GCP	2		81.0		729.0			
1,270.0	None	None		1,270.0	GCP	7		127.0		1,143.0			
850.0	None	None		850.0	GCP	2		85.0		765.0			
810.0	None	None		810.0	GCP	2		81.0		729.0			
1,430.0	None	None		1,430.0	GCP	2		143.0		1,287.0			
1,100.0	None	None		1,100.0	GCP	2		110.0		990.0			
1,200.0	None	None		1,200.0	GCP	2		120.0		1,080.0			

(1) PROJ. NO.	(2) PROJECT TITLE	(3) PROJ. PRIO.	(4) 3% Inflation per year PROGRAMMED EXPENDITURES & FUNDING SOURCES (FS) (000's)																	
			2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011							
			FS		FS		FS		FS		FS		FS							
7	Distribution Mains such as (continued):																			
	e. Mains in Area #5 - 703500	A																		
	98th, Pine Lake to Yankee Hill CB		1,010.0	RB																
			70.0	IF																
	f. Mains in Area #6 - 703600	A																		
	Rokeby, 27th to 40th HD		490.0	RB					420.0	UR										
									40.0	IF										
	27th, Rokeby to Satillo HD		700.0	RB																
			70.0	IF																
	40th, Yankee Hill to 1/2 mile so of Rokeby SE		700.0	RB																
	Rokeby, 40th to 48th SE							210.0	UR											
								120.0	UR											
	Yankee Hill, 56th to 84th SE							2,700.0	UR											
								220.0	IF											
	Yankee Hill, 70th to 84th CB				700.0	UR														
	70th, Pine Lake to Yankee Hill SE		430.0	RB																
			240.0	RB																
	84th, Amber Hill to Cheney Booster Reservoir CB				360.0	UR														
	27th, Kendra Ln to Jamie Ln HD		250.0	RB																
	g. Mains in Area # 7 - 703700	A																		
	Folsom, Pioneers to Old Cheney Bel											550.0	UR							
												150.0	IF							
	Folsom, Old Cheney to W Denton Bel											700.0	UR							
	Old Cheney, 1st to 14th Bel											700.0	UR							
	TOTAL PROJECT 7		3,960.0		1,060.0		3,250.0		460.0		2,100.0		0.0							
8	Distribution Capacity/Subsidies to Street Construction																			
	a. Distribution System Capacity Cost - 506050	A	340.0	UR	350.0	UR	370.0	UR	380.0	UR	400.0	UR	420.0	UR						
	b.1 Subsidies To Street Construction - 701690	A	350.0	UR	450.0	UR	400.0	UR	100.0	UR	500.0	UR	380.0	UR						
	b.2 Subsidies to Antelope Valley - 701690	A	400.0	UR	50.0	UR	100.0	UR	400.0	UR	150.0	UR	120.0	UR						
	TOTAL PROJECT 8		1,090.0		850.0		870.0		880.0		1,050.0		920.0							
	FUNDING SOURCE BREAKDOWN:																			
	DC (Developer's Contribution)		0.0		159.0		0.0		0.0		0.0		0.0							
	RB (Revenue Bonds)		12,270.0		12,360.0		13,000.0		16,000.0		14,000.0		12,560.0							
	UR (Utility Revenue)		1,200.0		6,400.0		4,920.0		2,525.0		5,905.0		1,090.0							
	IF (Impact Fee Revenue)		620.0		830.0		850.0		870.0		1,240.0		1,150.0							
			=====		=====		=====		=====		=====		=====							
	DIVISION TOTALS		14,090.0		19,749.0		18,770.0		19,395.0		21,145.0		14,800.0							

(5)	(6)	(7)		(8)	(9)	(10)	(11)						(1)		
							COST BREAKDOWNS FOR SIX-YEAR EXPENDITURES (000's)								
							PRELIM PLANS	FINAL PLANS	LAND ACQUISITION	CONST	EQUIP / FURNISH	OTHER (EXPLAIN)		PROJ. NO.	
TOTAL FOR SIX YEARS (000's)	COST BEYOND 2010-2011 (000's)	PRIOR APPROPRIATIONS (000's)	YEAR	FS	TOTAL CAP COSTS (000's) (5)+(6)+(7)	COMP PLAN CONFORM	STATUS OF PLANS								
1,080.0	None	None			1,080.0	GCP	7		108.0		972.0				7
950.0	None	None			950.0	GCP	2		95.0		855.0				
770.0	None	None			770.0	GCP	7		77.0		693.0				
700.0	None	None			700.0	GCP	2		70.0		630.0				
330.0	None	None			330.0	GCP	2		33.0		297.0				
2,920.0	None	None			2,920.0	GCP	2		292.0		2,628.0				
700.0	None	None			700.0	GCP	1		70.0		630.0				
670.0	None	None			670.0	GCP	2		67.0		603.0				
360.0	None	None			360.0	GCP	1		36.0		324.0				
250.0	None	None			250.0	GCP	7		25.0		225.0				
700.0	None	None			700.0	GCP	2		70.0		630.0				
700.0	None	None			700.0	GCP	2		70.0		630.0				
700.0	None	None			700.0	GCP	2		70.0		630.0				
10,830.0															
2,260.0	Ongoing	NA			2,260.0	GCP			226.0		2,034.0				8
2,180.0	Ongoing	NA			2,180.0	GCP			218.0		1,962.0				
1,220.0	Ongoing	NA			1,220.0	GCP			122.0		1,098.0				
5,660.0															
159.0															
80,190.0															
22,040.0															
5,560.0															
=====															
107,949.0															

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